

REMARKS

This Amendment is filed in response to the Office Action mailed May 18, 2007. All objections and rejections are respectfully traversed.

Claims 1-6, 12-14, and 26-27 are in the case.

Claims 26-27 were added.

Claims 1, 4, 6, and 13 were amended.

Claims 7-11 and 15-25 are cancelled. The claims were previously withdrawn; and Applicant reserves the right to bring the claims in a continuation or divisional application.

Request for Interview

The Applicant respectfully requests a telephonic interview with the Examiner after the Examiner has had an opportunity to consider this Amendment, but before the issuance of the next Office Action. The Applicant may be reached at 617-951-2500.

Objections

The specification has been updated to reflect the maturing of United States Patent Application No. 10/078,601, to United States Patent No. 6,981,877.

At paragraph 5, claim 6 was objected. Amendment of claim 6 is believed to satisfy this objection.

Rejections Under 35 U.S.C. § 112

At paragraph 6 of the Office Action, the Examiner rejected claims 3 under 35 U.S.C. § 112, paragraph 2 as being nonenabling for compression greater than about 100 psi.

At paragraph 6, Examiner states in part:

“...The claims encompass all pressures greater than about 100 psi which unduly extends beyond the scope of that which the instant application is entitled....The claimed and disclosed fuel cell materials have inherent limitations therein which depending on the severity of the compressive force would damage the fuel cell and render it inoperative. Neither the claims nor the specification provide reasonable enablement for a range of values which were appreciated as being defining of the claimed compression and the claimed invention cannot reasonably permit recitation of the open-ended and infinite upper value of the claimed compressive force.” (emphasis added)

MPEP 2164.08(b) states in part:

“The presence of inoperative embodiments within the scope of a claim does not necessarily render a claim nonenabled. The standard is whether *a skilled person could determine which embodiments that were conceived, but not yet made, would be inoperative or operative with expenditure of no more effort than is normally required in the art.* *Atlas Powder Co. v. E.I. DuPont de Nemours & Co.*, 750 F.2d 1569, 1577, 224 USPQ 409, 414 (Fed. Cir. 1984).” (emphasis added)

“A disclosure of a large number of operable embodiments and the identification of a single inoperative embodiment *[does] not render a claim broader than the enabled scope because undue experimentation was not involved in determining those embodiments that were operable.* *In re Angstadt*, 537 F.2d 498, 502-503, 190 USPQ 214, 218 (CCPA 1976).” (emphasis added)

Applicant respectfully argues that *a skilled person could determine which embodiments...would be inoperative or operative with expenditure of no more effort than is normally required in the art.* As such, one of ordinary skill in the art would be able to

ascertain, without undue experimentation, a maximum amount of pressure so as not to “damage the fuel cell and render it inoperative.” In other words, one skilled in the art, without undue experimentation, would be able to determine that using an “infinite upper value of the claimed compressive force” may not comprise an operable embodiment.

Accordingly, Applicant respectfully urges that claim 3 is legally sufficient to enable one skilled in the art to practice or make the claimed invention commensurate in scope with claim 3 under 35 U.S.C. § 112 because *a skilled person could determine which embodiments... would be inoperative or operative with expenditure of no more effort than is normally required in the art.*

At paragraph 6 of the Office Action, the Examiner rejected claims 4 and 13 under 35 U.S.C. § 112, paragraph 2 as being indefinite. Amendment of the claims is believed to satisfy these rejections.

Rejections Under 35 U.S.C. § 102

At paragraph 8 of the Office Action, claims 1, 2, 4, 5, and 12 were rejected under 35 U.S.C. §102(b) as being unpatentable in view of Pratt, U.S. Patent No. 6,127,058 issued on October 3, 2000 (hereinafter “Pratt”).

Applicant’s claimed novel invention, as set forth in representative claim 1, comprises in part:

1. A conformable fuel cell, comprising:

(A) a membrane electrolyte intimately interfacing with a catalyst layer along each of the membrane’s major surfaces being a catalyzed membrane electrolyte, having an anode aspect and a cathode aspect, and which *catalyzed membrane electrolyte is conformable to a desired shape;*

(B) diffusion layers sandwiching said catalyzed membrane electrolyte, said diffusion layers being comprised of materials that are conformable;

(C) flexible current collectors coupled with each of said anode aspect and said cathode aspect of said membrane electrolyte;

(D) fuel delivery means coupled with said anode aspect of said membrane electrolyte that delivers fuel substantially uniformly to said anode aspect while said fuel cell maintains said desired shape; and

(E) electrical coupling disposed across said anode aspect and said cathode aspect and having means for connection to an application device being powered by said fuel cell.

Applicant respectfully urges that Pratt does not show Applicant's claimed novel *catalyzed membrane electrolyte is conformable to a desired shape*.

Examiner cites Pratt, Fig. 4, as anticipating claim 1. Pratt's description of Fig. 4 is as follows:

"FIG. 4 depicts an embodiment wherein the current collector assembly is fabricated in a very thin and flexible format by replacing the plastic frame with a plastic film 44 that has metal current collectors 45, for example, using a structure very much like a flexible circuit. Flexible circuits are well known in the printed circuit board industry, and the techniques of fabrication are readily available. In this case, the plastic film contains holes to provide passage of fuel and oxidant to the electrode. The current collectors are etched in the metal foil just like circuitry is etched to make a printed circuit. In addition, the metal current collectors can be formed by vacuum deposition. Electrical interconnections 46 are also made by connecting the outlying interconnect means to each other without traversing the MEA. This structure is even thinner than other embodiments, and the flexibility allows it to be formed into curvilinear shapes.

In addition, our planar fuel cell can be essentially doubled by adding another cell. In FIG. 5 there are two laminated structures 52, 53 each containing an MEA sandwiched between two current collector assemblies. A fuel chamber 55 is common to each of the structures 52, 53 and the two covers 36 provide ambient air to the respective sides of the two structures. This structure retains the flat advantage and still provides a planar fuel cell, but it now has doubled the capacity." (emphasis added)

Applicant further directs Examiner to Pratt, col. 2, lines 40-55:

“The membrane electrode assembly (MEA) is a single sheet of a polymer electrolyte membrane with an array of anodes on one side and an array of corresponding cathodes on the other side...In our preferred embodiment, the solid electrolyte is a polymer electrolyte membrane (PEM).” (emphasis added)

Applicant respectfully directs Examiner to the second full paragraph on page 4 of Applicant’s specification:

“As used herein, when used to describe a fuel cell, a fuel cell array or a fuel cell system, ‘**conformable**’ shall mean being fabricated in such a fashion as to generally conform to the contours of the desired application or being sufficiently pliable to allow the assembly to meet a variety of shapes or to change shape based on the form of the object to which it is attached.” (emphasis added)

Pratt teaches an MEA as a single sheet of a polymer electrolyte membrane (PEM), where the polymer electrolyte membrane is solid. Neither in Pratt’s description of Fig. 4 nor elsewhere throughout the Pratt Patent does Pratt teach or suggest the concept of Applicant’s claimed novel ***catalyzed membrane electrolyte is conformable to a desired shape***.

Accordingly, Applicant respectfully urges that the Pratt patent is legally precluded from anticipating the claimed invention under 35 U.S.C. § 102 because of the absence from the Pratt patent of Applicant’s claimed novel use of a ***catalyzed membrane electrolyte is conformable to a desired shape***.

Rejections Under 35 U.S.C. § 103

At page 7 of the Office Action, claims 3, 6, 13, 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Pratt, and in view of Rosen U.S. Patent No. 6,045,575, in view of Kelley U.S. Patent No. 6,268,077, in view of JP 02-234358 (hereinafter “JP ‘358”), in view of Wilkinson U.S. Patent Application No. 2001/0041281, in view of Zaima U.S. Patent No. 4,973,531, and in view of Dristy U.S. Patent Application No. 2002/0071984.

Claims 3, 6, 13, 14 are dependent claims that are dependent from independent claims which are believed to be allowable for the reasons described above. Accordingly, claims 3, 6, 13, 14 are believed to be in condition for allowance.

All independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims, and therefore in condition for allowance.

Favorable action is respectfully solicited.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

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